

REMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 10-25 are pending in the application. Claims 1-9 has been cancelled, and replaced with new claims 10-25. New claims 10-25 find solid support in the specification and the drawings, especially page 5, lines 7-9 and 18-19, page 6, lines 4-7 and 9-10, and original claims 7-9. No new matter has been introduced through these amendments.

The specification has been revised to improve grammar.

The numerous anticipation rejections of claims 1-9 are moot in view of the foregoing amendments.

New claims 10-25 are not anticipated by any of the applied references. More particularly, independent claims 10 and 20 now require that the container of the present invention comprise, among other things, an outer bag, a first inner bag accommodated in the outer bag and filled with a liquid, and a second inner bag accommodated in the outer bag and containing therein a substance to be mixed with the liquid. The first inner bag is made liquid-impermeable except at least for a liquid-releasing hole that is closed by a first seal configured to open when a pressure inside the first inner bag reaches a predetermined level by heating the liquid, thereby allowing the heated liquid to escape the first inner bag. **The second inner bag is made liquid permeable at least partially for allowing the liquid, after escaping the first inner bag, to enter the second inner bag and to heat and be mixed with the substance.** None of the applied references teach or disclose each and every element of the new independent claims.

Yamada (JP10139077) discloses a container for heating a package of wet tissue paper and storing the heated tissue paper. The container's outer bag, which is sealed, contains a heating agent such as a gel or other liquid substance whose temperature rises as it is subject to high-frequency waves. The heating agent is discharged outside the heating-agent container as the temperature rises. However, the package of wet tissue paper is not disclosed to be permeable to the heating agent, to allow the heating agent to enter the package, heat and be **mixed** with the wet tissue paper, as presently claimed. Thus, Yamada does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose **an internal heating element**, and an outer bag having both vapor-releasing hole and a liquid-releasing hole as recited in claim 10.

Melnick (US3547658) discloses a container that contains two hermetically sealed containers: (1) one contains dried eggs, and (2) the other one contains other ingredients that are to be mixed with the dried eggs and then to be cooked with the eggs. The two sealed containers can be opened, and the contents of the inner containers can be mixed in the outer container. Melnick fails to teach or disclose a first inner bag filled with **liquid**, and a second inner bag partially **liquid permeable**, as presently claimed. Thus, Melnick does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose **an internal heating element**, and an outer bag having both **vapor-releasing hole** and a **liquid-releasing hole** as recited in claim 10.

Murata (US 5342634) teaches a first container (which is called an inner package) for storing pasta and a second container (which is called a supplement pouch) for storing seasoning which are separately accommodated in an outer bag (which is called an outer casing). The pasta container is to be removed from the outer casing after opening the outer casing and directly put in hot water in order to cook the pasta. This technique is not related in any manner to the presently claimed invention. More particularly, Murata fails to teach or disclose a first inner bag filled with **liquid**, and a second inner bag partially **liquid permeable**, as presently claimed. Thus, Murata does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose **an internal**

heating element, and an outer bag having both vapor-releasing hole equipped with a **seal** and a liquid-releasing hole as recited in claim 10.

Sasaki (JP410042800A) discloses an outer container, to be heated in a microwave oven, that contains food to be cooked and an inner plastic container that has micro-pores through which gas can be released when the outer container is placed in a microwave oven for heating. Solid food materials that are to be seasoned appear to be directly placed in the outer container rather than in an inner bag as presently claimed. Liquid materials (such as soup stock or sauce) used for seasoning the solid materials are stored in the inner plastic container, which allows the liquid seasoning materials to flow out through micropores. Thus, Sasaki fails to teach or disclose **a second inner bag being partially liquid permeable and storing a substance therein**, as presently claimed. Sasaki therefore does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose **an internal heating element**, and an outer bag having both vapor-releasing hole and a liquid-releasing hole as recited in claim 10.

Ichikawa (JP 63131926) discloses a vapor-heating method in accordance with which (a) the contents to be heated and a package filled with water are placed in an outer package, (b) by microwave heating, the package filled with water generates vapor, and (c) the generated vapor heats the contents to be heated. As can be seen in Fig. 3 of Ichikawa, the food is directly placed in the outer container rather than in a separate inner bag. Thus, Ichikawa fails to teach or disclose **a second inner bag being partially liquid permeable and storing a substance therein**, as presently claimed. Ichikawa therefore does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose **an internal heating element**, and an outer bag having both vapor-releasing hole and a liquid-releasing hole as recited in claim 10.

Tanaka (JP 409308502A) discloses a heat-generating bag for generating a high temperature and heating the inside of shoes. The heat-generating bag comprises an outer bag and an inner bag, and the inner bag, which has a ventilation capability, contains iron powder or the like, which reacts

with air and thereby generates heat. There is no **liquid containing bag** as presently claimed. Tanaka therefore does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose an outer bag having a **liquid-releasing hole** as recited in claim 10.

Donnelly (US 4067313) discloses a hot pack consisting of: (a) an inner bag that stores water, and (b) an outer bag that contains said inner bag as well as compound substances that react with water and thereby generate heat. The inner water-containing bag is formed in such a way that it breaks more easily than the outer bag does, and such that water flows out of the inner bag when that bag is broken due to pressure applied to it from the outside, thereby initiating the heat-generating reaction. The compound substances that react with water are directly placed in the outer container rather than in a separate inner bag. Thus, there is no **second inner bag being partially liquid permeable and storing a substance therein**, as presently claimed. Donnelly therefore does not anticipate independent claims 10 and 20. The reference also fails to teach or disclose an outer bag having both vapor-releasing hole and a **liquid-releasing hole** as recited in claim 10. Of particular note, the water in Donnelly is not deemed to be edible, as recited in claims 11-13 and 25.

For the above reasons, Applicants respectfully submit that new independent claims 10 and 20, as well as claims 11-19 and 21-25 depending therefrom, are patentable over the applied art of record. Claims 11-19 and 21-25 are also patentable on their own merit since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

For example, none of the applied references disclose, teach or suggest that the **second inner bag is bonded to the bottom of the outer bag** whereby only the heated and mixed liquid can be discharged from the outer bag, as recited in claims 14 and 24.

Contrary to the Examiner's assertion in the Office Action, there is no **time adjustable seal** disclosed in the applied reference, as recited in claim 15.

None of the applied references disclose, teach or suggest a **time indicator** for displaying the time when the second seal is open, a **pressure indicator** for indicating the pressure inside the outer bag, and a liquid releasing hole formed at the **bottom** of the outer bag, as recited in claims 16, 17, and 10, 23, respectively.

Each of the Examiner's rejections has been overcome. Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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MARKED-UP VERSION SHOWING CHANGES

TITLE OF THE INVENTION: AN ACCOMMODATION BAG

RECEIVED
DEC 05 2001
TC 1700

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

This invention relates to an accommodation bag wherein mixing of plural number of liquids to be processed (heating or mixing), or of the aforementioned liquids and goods is made possible in one external package by heating with the usage of an outer pressure or a microwave oven and the like, and an accommodation bag equipped with a heat generation means for generating a heat generation chemical reaction in an independent bag in the liquid accommodation bag without being mixed with the liquids, and making it possible for using only the heat thus generated.

2. DESCRIPTION OF THE PRIOR ART

Conventionally, when a liquid or the plural number of goods are planned to be used by heating or mixing, it required ~~so~~ labour and ~~a~~ time for ~~preparation~~ preparation of a heating apparatus as they are stored in separate containers and the like respectively. There has been no apparatus having such a structure as to carry out these operations in one outer package easily. As to the foods, for saving ~~a~~ cooking time and ~~a~~ labour, the frozen foods or processed foods, which are cooked foods being frozen in a pack, are used as easily preparable ones for edible condition. As to such a beverage as tea or coffee, it requires water and heating, and generally takes ~~a~~ time/labour for preparation. Nothing ~~is~~ existed so far ~~for~~ which becomes drinkable by applying the heat only.

SUMMARY OF THE INVENTION

1. PROBLEMS TO BE RESOLVED BY THE INVENTION

When the plural kinds of liquids of different quality are mixed or mixed with other goods, there has been a problem that the quality is rapidly deteriorated. In the case of the foods, the taste is lost and a validity period is shortened as well. The frozen foods have a problem that it takes time and labour for thawing and the taste becomes deteriorated. As to the processed foods, since it is preseasoned, the taste is lowered if it elapses a long time. There are some which become edible just by heating with a microwave oven, but a variety is limited and seasoning is also limited to a simple one.

2. MEANS OF SOLVING THE PROBLEM

For making it possible to easily carry out heating or mixing of plural goods in one bag, this invention has a basic structure wherein the plural number of accommodation bags are installed in one outer bag in a manner that at least one of which is a liquid accommodation bag, having a heating means in it when necessary. Namely, it is constituted with a heat resistance outer bag having a vapor releasing hole on a top face, which is to be formed in accordance with an inside pressure of the accommodation bag, and a heat resistance liquid accommodation bag being installed in the outer bag accommodating the foods accommodation bag and the liquid. When the accommodation bag is heated by a microwave oven and the like, the liquid in the liquid accommodation bag flows out by a pressure inside the bag so as to make it possible for immersing and heating the foods in the foods accommodation bag, which allows a passage of the liquid. Also, in a case

that the number of liquid accommodation bag is plural, the mixture of the plural liquids is carried out in one outer bag.

The accommodation bag is also constituted with a heat resistance outer bag having a vapor releasing hole on the upper face and a hot water releasing hole formed on the bottom face, a heat resistance liquid/foods accommodation bag which accommodates the liquid/foods and allows the passage of the hot water is installed in the outer bag, and a heat resistance liquid accommodation bag which accommodates the liquid and is installed in the outer bag piled over the liquid/foods accommodation bag, wherein the liquid in the liquid accommodation bag is made to boil and the boiled water flows out over the liquid/foods accommodation bag when the outer bag is heated by the microwave oven and the like. Also, the vapor releasing hole, the hot water releasing hole and a means provided with the liquid accommodation bag for making the liquid flow out possible are holes to be formed respectively by heating, and are covered by sealings before being heated. Stripping off timing of the seals are different depending on the holes respectively. Therefore, vapor flow up time can be set arbitrarily, depending on the difference of heating conditions, strength or material of the seal. An expansion free displaying means is mounted so as to make a vapor pressure variation inside the accommodation bag visible.

Further, as to a method for heating the outer bag, the problem is solved by installing a heating means in the liquid accommodation bag. Namely, the heating means is independently installed in the liquid accommodation bag and has a means to obtain a heat generation by mixing, when they are used, at least two kinds of materials for generating the heat by chemical

reaction.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a brief cross-sectional view of the accommodation bag,

FIG. 2 is an operation explanation drawing of the accommodation bag,
and

FIG. 3 is an explanatory drawing of the display bag expandedly formed
accompanied by rising of an internal vapor pressure.

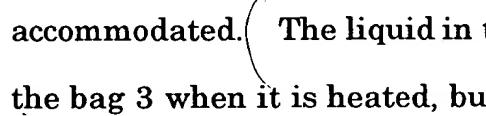
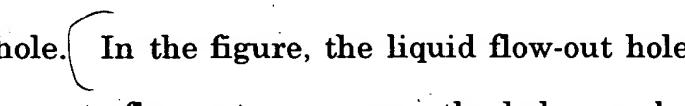
DETAILED DESCRIPTION OF THE INVENTION

1. EMBODIMENTS OF THE INVENTION.

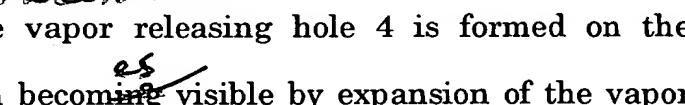
As shown in Fig.1, the accommodation bag comprises the outer bag 1, the liquid accommodation bag 3, the accommodation bag 7 which accommodates eating/drinking goods and the like, and the heating means 6. Each [of the] bag is made by adhering [the] two piled up sheets of synthetic resin material being superior in a heat resistance and by applying a heat sealing to its periphery. On the top face of the outer bag 1, a vapor pressure releasing hole 4 is formed, and on the bottom face of the bag 1, a hot water releasing hole 5 is formed and they are covered by seals. Since an inner part of the outer bag 1 ^{experiences} becomes a high pressure, the reinforcement seals are pasted to an outside of the top face, and an inside of the bottom face so that the holes are not torn out. A vapor pressure discharge adjusting packing seal is pasted to an inside of the upper face. The vapor pressure discharge adjusting packing seal is formed with a foaming polyester, flocked polyurethane foam and the like, which are durable for water and superior in

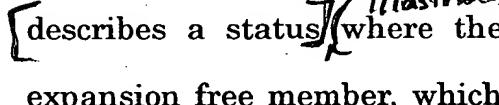
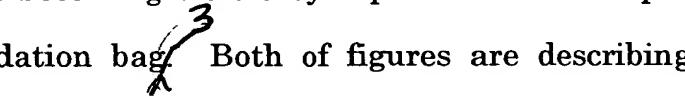
gas permeability and elasticity having a width of 2mm to 5mm degree.

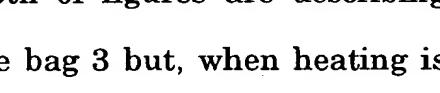
The liquid accommodation bag 3 is also made of two similar synthetic resin material sheets by being piled over similarly to that of the outer bag 1, whose periphery is heat sealed and formed in a bag shape, in which a fluid is accommodated.

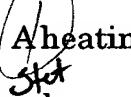
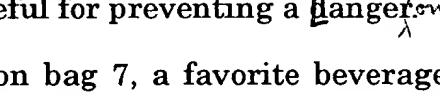
 The liquid in the liquid accommodation bag 3 outflows from the bag 3 when it is heated, but an outflow temperature of the liquid can be adjusted by a position of the hole.  In the figure, the liquid flow-out hole position is formed on the top so as to flow out as a vapor, the hole may be formed at the bottom. In this case, a vapor pressure inside the liquid

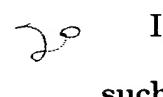
accommodation bag 3 should be closed so that it is opened at a higher vapor pressure than the one when the hole is formed at the top.]

 [The] Fig. 2 is  illustrates a condition describes a status where the liquid is flowed out from the bag 3, [and the] Fig. 3

 describes a status  illustrates a condition where the vapor releasing hole 4 is formed on the

expansion free member, which becoming  visible by expansion of the vapor pressure inside the accommodation bag.  Both of figures are describing where the heating means 6 is installed in the bag 3 but, when heating is carried out by the microwave oven, the heating means 6 is not required to be installed in an accommodation bag 7.

 A heating time display 8 in the Fig. 3 is  displaying a vapor blow up time. It can be useful for preventing a  dangerous condition.

 In the eating/drinking goods accommodation bag 7, a favorite beverage such as a black tea, Japanese tea, oolong tea and the like may be accommodated. The bag is made by overlaying two sheets of capillitium net or a non-woven cloth formed with a synthetic resin material. The sheet is superior in heat resistance and cold resistance property. The periphery of the sheet is also adhered in degree of 5mm or 10mm width. The bag 7 is

also acting as a filtering bag. When [the] ground coffee beans are accommodated, the bag is used as an eating/drinking goods accommodation bag 7 in a condition that the ground beans are clamped with a filtering paper from the above and the bottom. At the bottom of the eating/drinking goods accommodation bag 7, one or several or crossing synthetic resin material fiber thread of 0.5mm degree or a net is provided so as to rapidly and smoothly pass[es] hot water of the black tea or coffee, and carry out a pressure adjusting function smoothly in the eating/drinking goods accommodation bag 7. The eating/drinking goods accommodation bag 7 is pasted to a bottom inner side of the outer bag 1 with heat sealing.

With reference to the heating device 6 installed inside the liquid, it is considered to be a double constitution for utilizing a chemical reaction, wherein an oleaginous oil is used on one part and a compound and the like composed of calcium and carbon is used on the other so that it yields a high temperature by reacting them when they are used.

2. EFFECTS OF THE INVENTION

The accommodation bag of this invention enables, as described above, to provide a cooking method of entirely new, simple and capable of processing or seasoning with the usage of a heat generation apparatus such as a microwave oven. Also, the bag is so deliberated that the favorite beverage such as a coffee, tea and the like is made ready for a drinkable condition without newly preparing ~~water~~ water. Further, the bag enables to supply a plural of materials, without deteriorating the tastes, keeping their quality stable, since the mixture or processing can be carried out when they are

used.

Likewise, since it provides a simple processing method wherein even a heat generation device such as the electronic oven is not required due to an internal heat generating apparatus, this invention can greatly contribute to the industry as the relief goods at the time of an emergency such as an occurrence of the earthquake and the like or an accident, or for areas where a relief is asked for.

EXPLANATION OF CODE

- 1 Outer bag
- 2 Liquid releasing hole
- 3 Liquid accommodation bag
- 4 Vapor releasing hole
- 5 Boiled water releasing hole
- 6 Heating means
- 7 Accommodation bag
- 8 Heat time display

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What is claimed is:

1. An accommodation bag wherein it comprises, an outer bag and one or more accommodation bags which have independent spaces from the outer bag and are yet accommodated in the outer bag.
2. An accommodation bag described in claim 1, wherein at least one of the accommodation bags is made capable of outflowing an inside liquid by heating.

3. An accommodation bag described in claim 1 or 2, wherein the outer bag is equipped with a vapor releasing hole.
4. An accommodation bag described in either of claim 1 to claim 3, wherein a boiled water releasing hole is equipped on the bottom face of the outer bag.
5. An accommodation bag described in either of claim 1 to claim 4, wherein the accommodation bags are capable of passing the boiled water through.
6. An accommodation bag described in either of claims to 1 to 5, wherein at least one of the bags accommodates a liquid and a heating means for heating the liquid thereof.
7. An accommodation bag described in either of claim 1 to claim 6, wherein the vapor releasing hole is sealed by a member being equipped with a vapor blow out time adjusting function.
8. An accommodation bag described in claims 1 to 7, wherein the vapor releasing hole is formed integrally with an expansion free display means for displaying an inside pressure of the outer bag, depending on the degree of expansion.
9. An accommodation bag described in claim 1 to claim 8 wherein the heating means is installed in a sealed container being sheltered from the inside of the accommodation bag in a manner that at least two kinds of materials, which generate a heat by chemical reaction, are separately stored so as to be mixed by an outer pressure.

ABSTRACT

This invention consists of an accommodation bag such that one outer bag accommodates multiple inner accommodation bags and at least one of the inner accommodation bags is a liquid-accommodation bag from which a liquid flows. Also, the liquids or goods that flow out from other multiple accommodation bags in the outer bag are processed and used by mixing with or coming into contact with each other. Therefore, it is also possible to use the processed liquid for drinking or eating by taking it via the bottom of the outer bag. As a heating means, either an outside means, such as a microwave oven or the like, or an independent container installed inside the liquid-accommodation bag, is used. The heat-generation means inside the liquid-accommodation bag is such that heat is generated when there are combined together at least two kinds of materials that generate heat by chemically reacting together, and such that only such generated heat can be utilized.

What is claimed is:

1. An accommodation bag wherein it comprises, an outer bag and one or more accommodation bags which have independent spaces from the outer bag and are yet accommodated in the outer bag.
2. An accommodation bag described in claim 1, wherein at least one of the accommodation bags is made capable of outflowing an inside liquid by heating.
3. An accommodation bag described in claim 1 or 2, wherein the outer bag is equipped with a vapor releasing hole.
4. An accommodation bag described in either of claim 1 to claim 3, wherein a boiled water releasing hole is equipped on the bottom face of the outer bag.
5. An accommodation bag described in either of claim 1 to claim 4, wherein the accommodation bags are capable of passing the boiled water through.
6. An accommodation bag described in either of claims to 1 to 5, wherein at least one of the bags accommodates a liquid and a heating means for heating the liquid thereof.
7. An accommodation bag described in either of claim 1 to claim 6, wherein the vapor releasing hole is sealed by a member being equipped with a vapor blow out time adjusting function.
8. An accommodation bag described in claims 1 to 7, wherein the vapor releasing hole is formed integrally with an expansion free display means for displaying an inside pressure of the outer bag, depending on the degree of expansion.
9. An accommodation bag described in claim 1 to claim 8 wherein the heating means is installed in a sealed container being sheltered from the inside of the accommodation bag in a manner that at least two kinds of materials, which generate a heat by chemical reaction, are separately stored so as to be mixed by an outer pressure.